9.0 CONCLUSIONS

1. The Riverhead Traffic Circle currently operates at an unacceptable LOS F during all peak traffic periods. Additional traffic volumes generated by the Riverside MUPDD project will make delays on the approaches to the roundabout interminable. Motorists will be forced to seek alternate routes to bypass the traffic circle, thereby creating potential traffic problems on parallel streets and other alternate routes. Extensive mitigation will be necessary for the Riverhead Traffic Circle to accommodate traffic generated by the proposed action.

2. There is a high incidence of rear-end collisions on the approaches to the Riverhead Traffic Circle attributable to the lengths of the queues on the approaches. These accidents can likely be reduced by improving efficiency of movements on the approaches to the roundabout.

3. Construction of a two-lane roundabout at the Riverhead Traffic Circle will produce substantial improvements to levels of service and significant reductions in delay, but probably not to the extent portrayed in the capacity analysis results. Other factors, like driver familiarity, comfort, and ability, would impact operational conditions and diminish the overall levels of service. Still, the two-lane roundabout would be a major improvement over the roundabout that currently exists.

4. Installation of a traffic signal at the intersection where the Riverhead Traffic Circle now lays would also improve levels of service and reduce delays, but not to the degree that a two-lane roundabout theoretically would. A signal would improve future Build traffic conditions to a level similar to, or slightly better than, currently exists. While it is recognized that the traffic circle is a landmark and identifiable feature for the community, a signal remains a viable option, as drivers are familiar with its operation and it is more easily modified if additional travel lanes are provided in the future.

5. The intersection of SR 24 and Old Quogue Road suffers operational failures during the weekday evening peak traffic period and the weekday mid-day peak traffic period, operating at LOS F and LOS E, respectively. The failures are due to the inability of motorists to execute northbound left-turns from Old Quogue Road onto SR 24. It will sustain further serious degradations in levels of service and substantial increases in delays as a result of the combined impacts of the Rivercatwalk project and the Riverside MUPDD project.

6. Aligning the Rivercatwalk driveway with Old Quogue Road at SR 24, in conformance with the Alternative 1 Build scenario, will improve levels of service during the weekday morning peak traffic period, but not during other peak periods. The alignment will, however, make the intersection a much stronger candidate for the installation of some type of mitigation, such as a traffic signal or a roundabout.

7. A traffic signal or a single-lane roundabout would produce significant benefits at the intersection of SR 24 and Old Quogue Road/Rivercatwalk driveway, returning the intersection to a condition with good levels of service and minimal delays. A two-lane roundabout would also work well, but the extra lane would be superfluous. A single-lane roundabout is preferred because of its aesthetic advantages and it does not delay motorists during off-peak traffic periods.

8. The primary intersection created by the MUPDD project will be the intersection of SR 24 and Main Street. The intersection will have to be controlled with either a traffic signal or a roundabout to improve upon the LOS F operational conditions that will exist upon its creation. Either would produce good levels of service with minimal delays and negate the impacts of site-generated traffic.

9. The secondary intersection created by the MUPDD project will be the intersection of SR 24 and Downtown Road. The intersection will have poor levels of service, but does not satisfy warranting requirements for installation of a signal. The

traffic conditions may not have to be mitigated if remedial measures are employed at the intersection of SR 24 and Old Quogue Road and the intersection of SR 24 and Main Street. The measures implemented at these intersections will create gaps in the SR 24 traffic flows at Downtown Road that should be sufficient to improve levels of service.

10. The intersection of SR 24 and Downtown Road would significantly benefit from the Alternative 2 roadway extension. Levels of service would improve to an acceptable LOS D during all peak traffic periods. This would reduce the need to employ mitigation measures at the intersection.

11. The intersection of SR 24 and Ludlam Avenue operates at an acceptable LOS C during all peak traffic periods, but will endure significant declines in levels of service as a result of the MUPDD project. The intersection will satisfy warranting requirements for the installation of a traffic signal, but no mitigation is recommended for the intersection. Like the intersection of SR 24 and Downtown Road, the intersection will derive benefits from the installation of either a traffic signal or roundabout at the intersection of SR 24 and Main Street. If this is done, the resulting gaps in the SR 24 traffic flows will likely be sufficient at Ludlam Avenue so that no mitigation will be necessary.

12. The Alternative 3 creation of a new roadway from the project site to Ludlam Avenue would not produce the desired benefit of significantly reducing delays at the intersection of SR 24 and Main Street. It would lessen delays at the intersection of SR 24 and Ludlam Avenue, but would be offset by increased delays at the intersection of CR 104 and Ludlam Avenue. It would also diminish the quality-of-life for residents and be a detriment to traffic conditions and safety at the Phillips Avenue School. These results effectively negate the viability of the Alternative 3 Build scenario.

13. The intersection of SR 24 and CR 105 will sustain slight delays on the approaches to the intersection as a result of trips generated by the MUPDD project, but levels of service will remain acceptable. Any delays are likely to be imperceptible to motorists. The volume-density operation of the traffic signal that currently exists at the intersection will respond well to any traffic increases from the MUPDD project, so no mitigation will be necessary.

14. There is a high incidence of rear-end collisions on the approaches to the intersection of SR 24 and CR 105. Improvements to the intersection since the accidents records were compiled should help to alleviate the conditions causing these types of accidents.

15. Analyses of the intersection of CR 104 and Old Quogue Road/Ludlam Avenue treated the intersection as two (2) separate intersections, CR 104 at Old Quogue Road and CR 104 and Ludlam Avenue. Together or independently, both intersections operated at a good LOS B during all peak traffic periods and will continue to have good levels of service with the introduction of traffic generated by the MUPDD project. Neither intersection will require mitigation.

16. The Alternative 2 roadway extension would reduce the amount of traffic traveling through the residential portion of Old Quogue Road. It also creates the ability to potentially dead end Old Quogue Road at CR 104.

17. Accident experience on the through portion of SR 24, in the vicinity of the proposed site entrances, and at the intersections of SR 24 at Old Quogue Road, SR 24 at Ludlam Avenue, and CR 104 at Old Quogue Road/Ludlam Avenue, did not reveal any unusual incidences that would require mitigation.

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